



# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P26484PC00/JV	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/NL 03/00786	International filing date (day/month/year) 10.11.2003	Priority date (day/month/year) 12.11.2002
International Patent Classification (IPC) or national classification and IPC B26F1/26		
Applicant STORK PRINTS B.V.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 11 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  03.06.2004	Date of completion of this report  28.02.2005	
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Vaglianti, G  Telephone No. +31 70 340-2935  	

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10/534552  
JC20 Rec'd PCT/PTO 10 MAY 2005  
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**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☒ This report is based on translations from the original language into the following language english, which is the language of a translation furnished for the purposes of:
    - ☒ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-13 as originally filed

**Claims, Numbers**

1-23 as originally filed

**Drawings, Sheets**

1/3-3/3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 21,22,23 (claims 22 and 23 only when they depend from claim 21)

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 21,22,23 (claims 22 and 23 only when they depend from claim 21)

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See separate sheet for further details

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**Box No. IV Lack of unity of invention**

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1. ☒ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☒ restricted the claims.
  - ☒ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☐ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
  - ☐ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
  - ☒ the parts relating to claims Nos. 1-15,22,23 (claim 22 only when depending from claims 8-13, claims 14,15,23 only when depending from claims 1-13) .

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	3-7,9-13
	No: Claims	1,2 ,8,14,15,22,23
Inventive step (IS)	Yes: Claims	
	No: Claims	1-15,22,23
Industrial applicability (IA)	Yes: Claims	1-15,22,23
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Re Item IV**

**Lack of unity of invention**

1 Reference is made to the following documents:

D1: US-A-3759799

D2: US-A-6024553

D3: US-A-5681301

- 2 According to the state of the art as represented by D1-D3 and the documents cited in the annex to form PCT/ISA/206 it would appear that the claims can be regrouped in four independent groups of claims, i.e.: a first group constituted by claims 1-7, 14, 15 and 23 (claims 14, 15 and 23 only when they depend from claims 1-7) concerning a metal screen material and methods of using it;
- 2.1 a second group constituted by claims 8-15, 22 and 23 (claims 14, 15, 22 and 23 only when they depend from claims 8-13), concerning a method of electrolytically growing metal screen material, a screen obtained by the method and methods of using it;
- 2.2 a third group constituted by claims 16-20, 22 and 23 (claims 22 and 23 only when they depend from claims 16-20) concerning methods of bonding a support screen material, and a method of using it, and
- 2.3 a fourth group constituted by claims 21-23 (claims 22 and 23 only when they depend from claim 21) concerning a method of positioning a perforating screen material over a support screen material and a method of using it.

This observation is based on the following reasons:

- 3 D1 discloses a metal screen material having a flat side (D1: column 4, lines 20-25), comprising a network of dykes connected to one another by crossing points (D1: figures 3, 4, 13 and 14; column 4, line 48-column 5, line 24). After etching (figure 6; column 5, line 70 -column 6, line 16), at least some of the dykes will delimit openings, and, due to the structure of the wire mesh, the thickness of the

crossing points will necessarily be not equal to the thickness of the dykes. As there are no features indicating the position of the "flat side" relative to the dykes and the openings, D1 discloses all the features of claim 1.

For the reasons given above D1 also implicitly discloses the features of claim 2, thus it would appear that, in the light of what is already disclosed by D1 or would be obvious to a man skilled in the art, the Potential Special Technical Feature (PSTF) which constitutes the difference between the apparatus disclosed in D1 and the apparatus described in the first independent group of claims (claims 1-7, 14, 15 and 23) is disclosed in claim 3 and concerns a specific range for thickness of the dykes, where the problem to be solved can be construed as improving the fluid drainage.

- 4 It would appear that, in the light of what is already disclosed by D1 or would be obvious to a man skilled in the art, and disregarding the non-limitative features of claim 8: "in particular according to one of the preceding claims", the PSTF constituting the difference between the method of manufacturing a screen material having a flat side disclosed in D1 and the method described in the second independent group of claims (claims 8-15, 22 and 23) is disclosed in claim 8 and concerns influencing the growth rate at the crossing point of a flat screen skeleton (wherein the term "flat screen" has been interpreted according to the definition given in the description on page 5, lines 22), where the problem to be solved can be construed as obtaining differences in thickness between dykes and crossing points that are to some extent independent from the structure of the underlying skeleton.
- 5 The document D2 discloses that a forming sleeve can be shrunk to a dimension suitable to accommodate a wire-like support (see column 13, lines 5-15), however the forming sleeve is shrunk prior to creating a forming surface in it, and taking into account the process of manufacturing the forming surface referenced by D2 (see column 9, lines 36-40 and D3, wherein the forming surface to be engraved is mounted on a mandrel, different from the support screen on which the forming surface is mounted for operation, whereas the term "screen" has been interpreted according to the sense given to it throughout the application as a foraminous material), this means that the forming surface of D2 is shrunk prior to being mounted onto a support screen and is not shrunk onto it. It would thus appear that, in the light of what would be obvious to a man skilled in the art, the PSTF constituting the difference between the method disclosed in D2 and the method

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described in the independent group of claims 16, 17, 22 and 23 is disclosed in claim 16 and concerns the shrinkage of a perforating screen onto a support screen, where the problem to be solved can be construed as bonding a perforating screen onto a support member.

The independent group of claims 18-20, 22 and 23 appears to concern the same problem of bonding a perforating screen onto a support member, it has hence been grouped along with claims 16, 17, 22 and 23 in a third group of claims (claims 16-20, 22 and 23).

- 6 It would appear that, in the light of what is already disclosed by D2 or would be obvious to a man skilled in the art, the PSTF constituting the difference between the method of manufacturing a screen material disclosed in D2 and the method described in the fourth independent group of claims (claims 21-23) is disclosed in claim 21 and concerns the step of pushing a perforating screen over a support screen with the aid of pressurized fluid, where the problem to be solved can be construed as positioning a perforating screen over a support screen.
- 7 It would appear that neither the technical problem, nor the Potential Special Technical Features proposed by the before mentioned independent groups of claims are the same or similar. Therefore there is no technical correspondence between the problems, nor do they show any corresponding technical effect, so that the PSTF of the different groups of claims fails to demonstrate a correspondence with each other's potential inventive concept, as required by rule 13.1 and 2 PCT.
- 4 The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above (see paragraphs 2, 2.1, 2.2 and 2.3).

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

- 1 According to the request made by the applicant with his letter dated 3 June 2004, this Opinion will deal only with inventions 1 and 2 of the 3 inventions for which a

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search has been made (see also International Search Report, in particular Box II and Further Information Continued from PCT/ISA/210), and namely:

- 1.1 Invention 1: claims 1-7, 14, 15 and 23 (claims 14, 15 and 23 only when they depend from claims 1-7),

metal screen material and methods of using it;

- 1.2 Invention 2: claims 8-15, 22 and 23 (claims 14, 15, 22 and 23 only when they depend from claims 8-13)

method of electrolytically growing metal screen material, a screen obtained by the method and methods of using it.

- 2 Reference is made to the following documents:

D1: US-A-3759799  
D2: US-A-6024553  
D4: US-A-4342314  
D5: US-A-5514105  
D6: EP-A-862904  
D7: EP-A-049022  
D8: WO-A-9920813  
D9: WO-A-9740213  
D10: EP-A-492731  
D11: EP-A-038104  
D12: US-A-5584983

- 3 Concerning invention 1.

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of the independent claim 1 is not new in the sense of Article 33(2) PCT.

- 3.1 D1 discloses a metal screen material having a flat side (D1: column 4, lines 20-25), comprising a network of dykes connected to one another by crossing points (D1: figures 3, 4, 13 and 14; column 4, line 48-column 5, line 24). After etching



(figure 6; column 5, line 70 -column 6, line 16), at least some of the dykes will delimit openings, and, due to the structure of the wire mesh, the thickness of the crossing points will necessarily be not equal to the thickness of the dykes. As there are no features indicating the position of the "flat side" relative to the dykes and the openings, D1 discloses all the features of claim 1.

- 3.2 Dependent claims 2-7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, the reasons being as follows.
- 3.3 For the reasons given in paragraph 3.1 D1 also implicitly discloses the features of the dependent claim 2, hence also the features of this claim are not new.
- 3.4 The features of claims 1 and 2 are explicitly or implicitly disclosed by each of the documents D4 and D5, which concern a perforating screen, and features equivalent to the ones of dependent claim 3 have already been employed for the same purpose (see D6). It would therefore be obvious to the person skilled in the art, to apply equivalent features with corresponding effect to a screen according to one of the documents D4 or D5, thereby arriving at a device according to claim 3. The features of this claim therefore do not meet the requirements of the PCT in respect of inventive step.
- 3.5 In claims 4-7 slight constructional changes in the screen of claim 1 are defined which come within the scope of the customary practice followed by persons skilled in the art (see e.g. D1, D4-D6), especially as the advantages thus achieved can readily be foreseen. Consequently, the features of claims 4-7 do not meet the requirements of the PCT in respect of inventive step.
- 3.6 The present application does not meet the criteria of Article 33(1) PCT, because the features of claim 14 are not new in the sense of Article 33(2) PCT. The reasons are the following.
- The screens described in D4 and D6, which disclose the features of claim 1 (see paragraph 3.4 above) are used for perforating a film material.
- 3.7 The features of claim 15 do not meet the requirements of the PCT in respect of novelty when, observing D4, figure 11, the screen elements (131, 132) are

considered as constituting a "support" screen and top screen-element (130) alone is considered a "perforating" screen.

A similar objection can be made taking into account D2, and observing in figure 2 that the crossing points of the supporting screen (101) have the thickness of the dykes (310), whose thickness is different from the one of the other dykes (320).

- 3.8 Since the devices described in D4 and D2 are used for perforating a film material, the features of claim 23 are not new in the sense of Article 33(2) PCT.

4 Concerning invention 2

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of the independent claim 8 is not new in the sense of Article 33(2) PCT.

- 4.1 D7 discloses a method comprising all the steps of claim 8, and in particular a step of electrolytically thickening a flat screen skeleton (11). A person skilled in fluid dynamics would recognize that in the skeleton (11) the concurrence of several walls in a crossing point will necessarily induce a flow behind the crossing point slower than the flow behind the dykes, this effect being equivalent to the creation of a "shelter". According to the observations made in D8 (see page 1, line 30-page 2, line 7) this will inevitably result in obtaining a different growth rate at the crossing points, hence all the features of claim 8 are explicitly or implicitly present in the method disclosed by D7.

It is observed that the screen obtained in D7 will also have all the features of claim 1. Therefore claim 1 (invention 1) is not new also having regard to this document.

Corresponding observations can be made for the screens obtained with the methods described by D8 and D9, therefore the screen according to claim 1 and the method according to claim 8 are not new also having regard to these documents.

- 4.2 Dependent claims 9-13 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, because they define slight changes which are already

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known and/or come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen (see D9-D12).

- 4.3 For the skilled person it would be obvious that a screen obtained with the method described in D7 can be used for perforating film material. The features of claim 14 therefore do not meet the requirements of the PCT in respect of inventive step.
- 4.4 The features of claim 15 do not meet the requirements of the PCT in respect of novelty for reasons corresponding to the ones given in paragraph 3.7 above.
- 4.5 Concerning claims 22 and 23 it has been assumed that these claims concern the method steps of claim 8.  
The subject-matter of these claims is therefore not new (see paragraph 4 above).